

Comet I. 1897 (*Perrine*, 1896 November 2).

Greenwich Mean Time of Observation.	*—* R.A.			Apparent R.A.			Declina- tion.	No. of Comparisons (δ)	Apparent Declination of Comet.	Log. Factor of Parallax in (α)	Letter of Refer- ence.
	h	m	s	h	m	s					
1896 Nov. 5	7 42	30.3	+0 12.42	20 17	9.61	— 9 49.0	Ret.	+23	2 4.6	+9.3254	<i>a</i>
5	7 42	30.3	— 1 35.89	20 17	9.36	+ 7 47.6	"	+23	2 2.5	+9.3254	<i>b</i>
8	6 49	50.0	— 0 16.81	20 12	33.87	+ 3 28.7	"	+20	41 26.2	+9.1968	<i>c</i>
13	7 50	10.2	— 0 40.93	20 6	9.27	+ 7 5.9	5	+16	57 55.8	+9.4260	<i>d</i>
26	6 0	36.4	— 0 7.94	19 55	42.57	+ 6 37.3	4	+ 8	53 27.0	+9.3035	<i>e</i>
26	6 0	36.4	+ 1 31.52	19 55	42.39	— 7 30.4	4	+ 8	53 24.9	+9.3035	<i>f</i>
29	6 26	39.2	+ 0 35.34	19 54	10.58	+ 2 33.6	Ret.	+ 7	16 47.2	+9.3939	<i>g</i>
30	6 22	14.9	— 1 13.21	19 53	43.52	+ 6 20.4	"	+ 6	45 59.7	+9.3939	<i>h</i>
30	6 22	14.9	— 1 8.82	19 53	43.40	— 10 1.7	"	+ 6	46 4.2	+9.3934	<i>i</i>

Notes

February 22.—Comet tolerably bright, but the selection of definite point for observation difficult. February 23.—The comet seemed much fainter, and the separate measures are very discordant. March 1.—Interruptions from clouds. The stars of comparison too far away in declination; the right ascension very uncertain. March 4.—Observation unsatisfactory; an attempt to repeat the observation with the reticule micrometer failed on account of clouds. March 21.—Comet v. ft.; observation doubtful.

April 21.—Comet tolerably bright, especially towards the south-east, which is the point selected for observation. April 28.—Comet well seen, notwithstanding bright moonlight. May 1.—Comet appears much fainter; the sky rather light, though the Moon had not risen. May 7.—Observation very unsatisfactory with either micrometer; the mean of the whole of the measures is given. May 9.—Interrupted by clouds. May 13.—Comet exceedingly faint; further observation probably impossible. May 16.—Brightness much the same as on May 13; comet just visible; no alteration noticeable. June 2.—Some of the measures rejected evidently had no reference to the comet, which could only be seen at intervals by glimpses.

Nov. 5.—Comet very faint and difficult to pick up; separate measures discordant. Nov. 8.—Only three observations possible on account of cloud. Nov. 26.—Comet very faint, but central stellar condensation suspected.

Assumed Mean Places of Stars of Comparison.

Comet I. 1896 (Perrine-Lamp).

Date.	Star's Designation or Authority for Place.	Mean R.A. 1896°. h m s	Correction to Mean R.A. s	Mean Declination 1896°. ° ' "	Correction to Mean Dec. "	Letter of Reference.
Feb. 22	W. B. ₂ xx. No. 1808	21 0 6.39	-0.76	+27 53 34.8	-10.9	a
22	Micrometer obs. from (a) and prime vertical	20 58 23.14	-0.77	+27 54 42.6	-10.7	b
23	Bonn Obs., vol. vi. No. 4150	21 20 9.55	-0.94	+32 30 33.7	-8.9	c
Mar. 1	A. G. Z. Camb. (U.S.), No. 172	0 20 42.36	-1.44	+50 42 15.8	+8.7	d
1	" " " No. 166	0 19 42.66	-1.45	+50 59 40.4	+8.7	e
3	" " " No. 535	1 4 21.76	-1.16	+51 34 32.4	+12.3	f
4	" " " No. 703	1 28 18.82	-1.00	+51 37 15.4	+13.8	g
4	" " " No. 709	1 29 7.51	-1.00	+51 37 54.7	+13.9	h
9	Bonn, No. 2312	2 36 29.59	-0.32	+49 56 31.6	+16.8	i
9	Camb. (U.S.), No. 1246	2 35 34.90	-0.36	+50 1 9.9	+16.4	j
11	Bonn, No. 2515	2 51 16.73	-0.20	+49 9 15.2	+17.0	k
11	" No. 2521	2 51 45.06	-0.20	+49 5 24.0	+17.0	
16	" No. 2999	3 26 57.48	+0.11	+46 55 29.3	+17.1	m
19	" No. 3125	3 37 23.38	+0.20	+45 46 14.1	+16.8	n
21	" No. 3240	3 46 42.41	+0.25	+45 12 8.4	+16.5	o

Comet III. 1896 (Swift).

Date. 1896.	Star's Designation or Authority for Place.	Mean R.A. 1896. h m s	Correction to Mean R.A. s	Mean Declination 1896. ° ' "	Correction to Mean Dec. "	Letter of Reference.
Apr. 21	Leiden Zones, Nos. 11, 243	3 31 2'55	+0'07	+30 46 33'0	+ 9'3	a
22	" " No. 148	3 32 19'92	+0'03	+33 30 59'7	+ 9'6	b
23	Lund Zones, Nos. 75, 79	3 25 7'02	+0'02	+36 7 42'5	+ 9'6	c
24	" " Nos. 92, 105	3 24 20'71	-0'09	+38 47 31'1	+ 9'8	d
24	" " Nos. 340, 498	3 27 12'70	-0'09	+38 57 19'8	+ 9'9	e
28	A. G. Z. Bonn, No. 2730	3 9 21'32	-0'36	+47 53 44'8	+ 9'6	f
28	" " No. 2732	3 9 37'40	-0'36	+47 44 41'0	+ 9'6	g
29	Bonn Obs., vol. vi. No. 873	3 5 45'96	-0'45	+50 3 57'0	+ 9'4	h
29	A. G. Z. Bonn, No. 2695	3 6 41'19	-0'45	+49 59 24'3	+ 9'4	i
May 1	" Camb. (U.S.), No. 1379	2 59 46'29	-0'64	+53 42 39'1	+ 9'0	j
1	" " " No. 1381	2 59 52'56	-0'64	+53 42 31'6	+ 9'0	k
3	A. G. Z. Helsingfors, No. 2591	2 46 22'80	-0'82	+56 54 26'0	+ 8'0	l
3	" " " No. 2568	2 44 47'99	-0'82	+56 49 38'7	+ 8'0	m
4	" " " No. 2404	2 32 25'41	-0'97	+58 12 38'3	+ 6'9	n
4	Rümker, No. 1403	2 40 34'84	-0'95	+58 23 44'8	+ 7'2	o
5	A. G. Z. Helsingfors, No. 2370	2 29 37'95	-1'05	+59 38 5'8	+ 6'6	p
6	" " " No. 2337	2 27 40'94	-1'14	+60 39 6'1	+ 6'3	q
6	" " " No. 2341	2 27 58'03	-1'14	+60 45 32'6	+ 6'3	r
7	" " " No. 2205	2 16 59'61	-1'27	+62 0 4'4	+ 5'4	s
7	" " " No. 2249	2 20 24'27	-1'24	+61 44 58'5	+ 5'6	t
8	" " " No. 2111	2 12 40'96	-1'34	+62 52 21'1	+ 4'8	u
8	" " " No. 2002	2 8 7'40	-1'35	+62 45 1'6	+ 4'5	v
9	" " " No. 2058	2 10 45'75	-1'43	+63 56 34'0	+ 4'5	w

May 1897.

at the Liverpool Observatory.

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Date.	Star's Designation or Authority for Place.	Mean R.A. 1896 ^o . h m s	Correction to Mean R.A. s	Mean Declination 1896 ^o . ° ' "	Correction to Mean Dec. "	Letter of Reference.
May 9	A. G. Z. Helsingfors, No. 2098	2 12 13.35	-1.42	+63 51 24.9	+ 4.6	<i>a</i>
10	" " No. 1887	2 0 52.96	-1.50	+64 32 32.0	+ 3.5	<i>y</i>
10	Greenwich 10-Year Catalogue, 1880, No. 314	1 56 50.70	-1.51	+64 36 13.7	+ 3.2	<i>z</i>
11	A. G. Z. Christiania, No. 340	1 46 23.63	-1.63	+65 40 3.5	+ 2.0	<i>aa</i>
12	" " No. 328	1 41 22.84	-1.66	+66 16 0.5	+ 1.9	<i>bb</i>
12	" " No. 336	1 44 47.64	-1.66	+66 13 18.0	+ 1.9	<i>cc</i>
13	" " No. 327	1 40 17.88	-1.74	+66 41 7.7	+ 1.2	<i>dd</i>
16	" " No. 245	1 12 50.54	-1.80	+68 33 7.5	- 0.4	<i>ee</i>
19	" " No. 189	0 54 40.55	-1.86	+69 57 38.4	- 3.1	<i>ff</i>
19	" " No. 177	0 51 21.28	-1.84	+69 56 1.4	- 3.4	<i>gg</i>
June 2	Bonn Observations, vol. vi. No. 1099	23 15 53.52	-0.61	+72 44 9.7	- 9.9	<i>hh</i>
Comet I. 1897 (Perrine, November 2).						
Nov. 5	A. G. Z. Berlin, No. 7657	20 16 54.91	+2.28	+23 11 34.8	+18.8	<i>a</i>
5	" " No. 7673	20 18 42.97	+2.28	+22 53 56.1	+18.8	<i>b</i>
8	" " No. 7610	20 12 48.42	+2.26	+20 37 40.0	+17.5	<i>c</i>
13	Munich Observations, vol. i. No. 23406	20 6 47.91	+2.29	+16 50 34.5	+15.4	<i>d</i>
26	" " No. 22619	19 55 48.19	+2.32	+ 8 46 39.0	+10.7	<i>e</i>
26	" " No. 22505	19 54 8.55	+2.32	+ 9 0 44.6	+10.7	<i>f</i>
29	" " No. 22473	19 53 32.88	+2.36	+ 7 14 3.8	+ 9.8	<i>g</i>
30	" " No. 22554	19 54 54.37	+2.36	+ 6 39 29.6	+ 9.7	<i>h</i>
30	Bonn Observations, vol. vi. No. 4391	19 54 49.86	+2.36	+ 6 55 56.2	+ 9.7	<i>i</i>

Liverpool Observatory : 1897 May 12.

Observations of Comets, Perrine, 1896 Nov. 2, and Perrine, 1896 Dec. 8, at the Radcliffe Observatory, Oxford.

(Communicated by E. J. Stone, Esq., M.A., F.R.S., Radcliffe Observer.)

The following comet observations were made with the 10-inch Barclay Equatorial, using the ring micrometer, with power 100 :—

Comet Perrine 1896 Nov. 2.

Date.	G.M.T.			Local Sidereal Time.			Observer.	Comet minus Star R.A.			Comet minus Star N.P.D.			No. of Comps.	Apparent R.A. of Comet.			Parallax in R.A. <i>p</i> .	Log. (<i>p</i> × Δ).	Apparent N.P.D. of Comet.			Parallax in N.P.D. <i>q</i> .	Log. (<i>q</i> × Δ).	Ref.
	h	m	s	h	m	s		m	s	°	'	''	h		m	s	°			'	''				
1896. Nov. 6	7	39	52	22	40	52	W.	+0	18.98	+1	3.9	9	20	15	30.60	+0.15	9.3690	67	45	53.6	3.0	0.6740	(a)		
9	7	22	38	22	35	25	W.	-1	37.41	+0	13.1	4	20	11	7.45	+0.14	9.3592	70	5	36.0	3.1	0.6975	(b)		
9	7	22	38	22	35	25	W.	-2	17.03	+6	1.2	4	20	11	7.50	+0.14	9.3592	70	5	36.6	3.1	0.6975	(c)		
26	7	46	6	0	5	59	R.	...	...	-0	32.5	7	...	...	...	...	...	81	8	56.4	3.6	0.8085	(d)
26	7	47	42	0	7	35	R.	-0	4.25	...	...	7	19	55	39.65	+0.18	9.5173	...	...	...	...	...	(d)
30	7	1	1	23	36	33	W.	-1	13.17	-5	19.6	4	19	53	43.50	+0.17	9.4825	83	15	1.5	3.5	0.8125	(e)		
30	7	1	1	23	36	33	W.	-2	36.81	-5	11.9	4	19	53	43.57	+0.17	9.4825	83	14	58.4	3.5	0.8125	(f)		
Dec. 7	6	24	46	23	27	48	R.	-0	43.96	-2	17.6	6	19	51	17.81	+0.16	9.4719	86	34	36.6	3.5	0.8261	(g)		

Comet Perrine 1896 Dec. 8.

Dec. 11	8	41	21	2	0	31	W.	-1	55.96	-0	47.6	3	1	10	19.25	+0.24	8.9013	84	38	33.1	18.8	0.8044	(h)
12	8	14	2	1	37	4	R.	-0	45.31	+0	52.4	8	1	17	16.32	+0.09	8.4986	85	2	24.5	18.7	0.8066	(i)
1897. Jan. 23	8	54	35	5	3	19	R.	-1	35.92	-0	11.7	6	4	44	52.53	+0.05	8.4704	90	20	21.9	12.5	0.8411	(j)
26	8	14	55	4	35	23	R.	+0	25.24	-0	31.0	12	4	53	47.69	-0.05	8.4698	90	6	46.6	11.8	0.8398	(k)